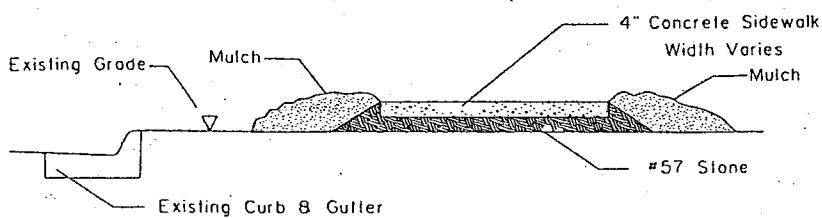


TREE PROTECTION SIDEWALK CONSTRUCTION NOTES:

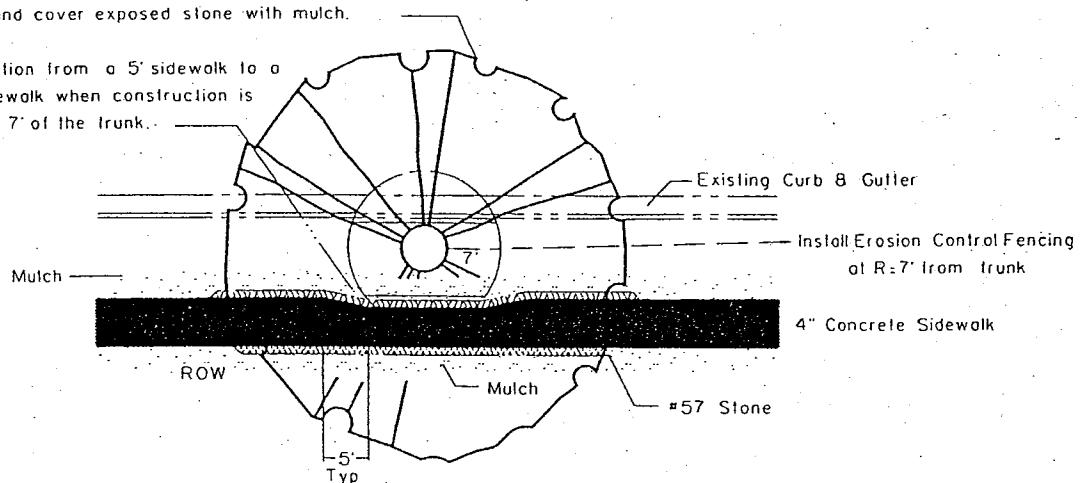
1. The Contractor shall take care not to damage trees or roots.
- 2 Excavation within a tree's drip line must be approved jointly by City Inspector John Rives and City Arborist Chris Boyer.
- 3 Reduce the sidewalk width from 5' to 4' when construction is within 7' of any tree trunk.
4. A minimum of 3" of #57 stone shall be placed under the sidewalk within the drip line of any tree.
5. Mulch the entire construction area adjacent to the Tree Protection Sidewalk Construction.
6. Seed and Mulch (Type II) the construction area.



CROSS SECTION OF  
TREE PROTECTION  
SIDEWALK CONSTRUCTION

No Excavation within drip line of tree.  
Place sidewalk on 3" layer (min) of #57  
stone and cover exposed stone with mulch.

Transition from a 5' sidewalk to a  
4' sidewalk when construction is  
within 7' of the trunk.



PLAN VIEW OF  
TREE PROTECTION  
SIDEWALK CONSTRUCTION

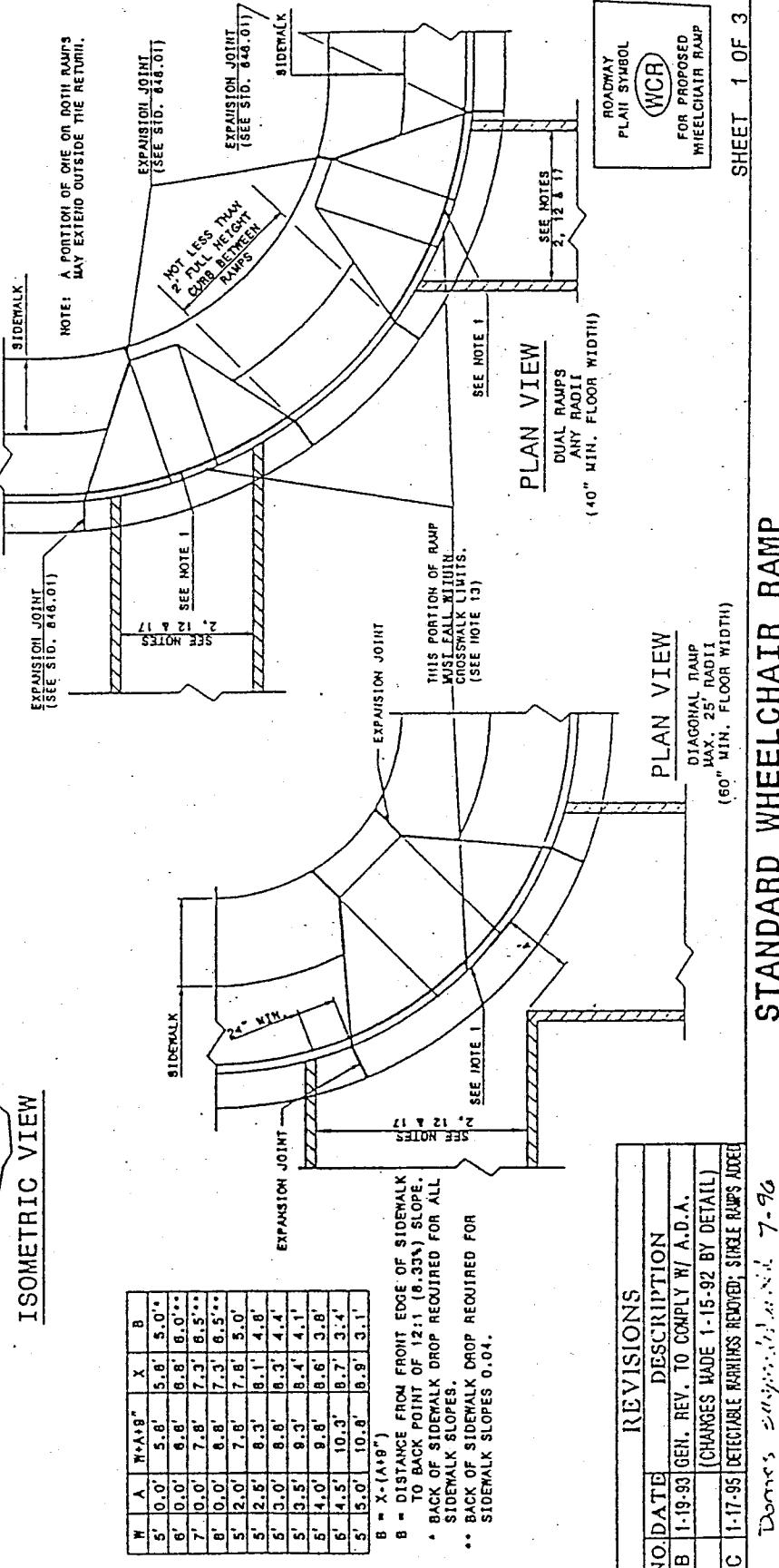
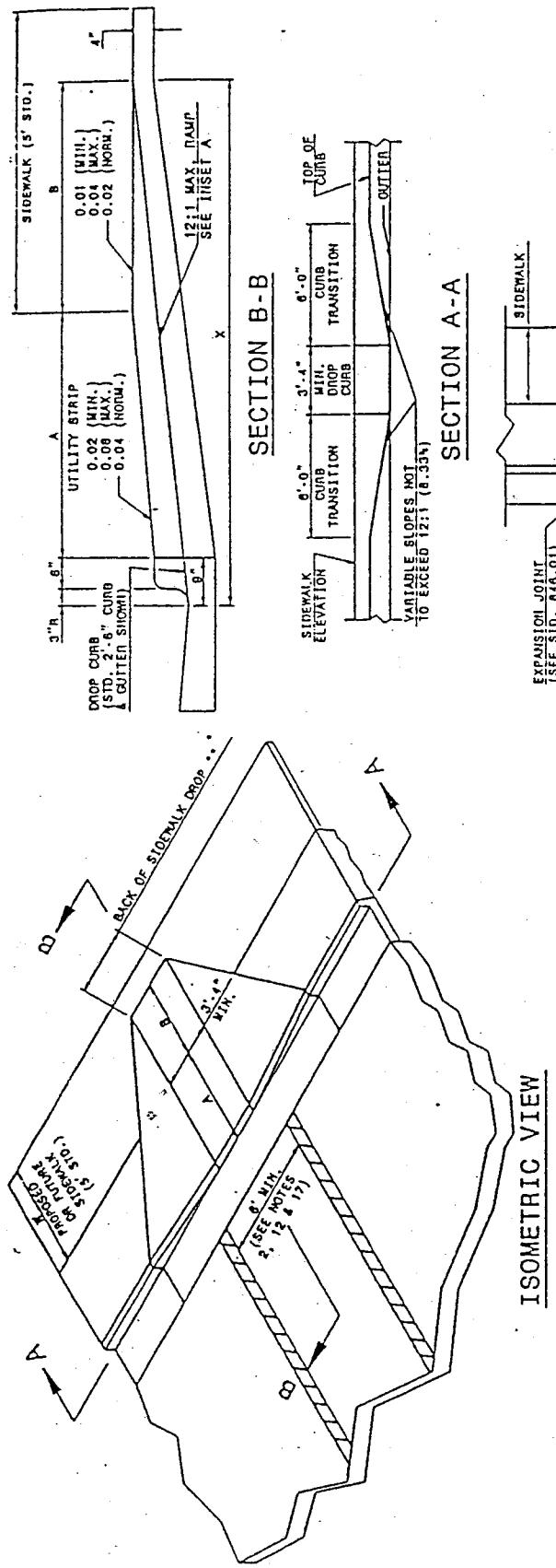
2. Seeding and Mulching:

Replace the fifth paragraph for "Item 43. SEEDING AND MULCHING" on page 37 of the "City of Durham Water and Sewer Construction Specifications" dated November, 1990 with the following:

Special attention is called to the portion of Section 880-4 of the North Carolina Department of Transportation and Highway Safety Specifications dealing with seedbed preparation. This project consists of two methods of seeding and mulching:

1. Type I. Type I seeding and mulching consists of loosening the soil by scarifying or other method to a depth of not less than 5 inches except as otherwise provided in Section 880-4 or directed by Engineer. Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers, drags, or harrows; or by other methods approved by the Engineer. All rock and debris 1 inch or larger shall be removed on cut or fill slopes which are 3:1 or flatter, medians, shoulders, and ditch slopes prior to the application of seed and fertilizer. Type I seeding and mulching will be required in all residential areas.
2. Type II. Type II seeding and mulching consists of loosening the soil by scarifying or other method to a depth of not less than 5 inches except as otherwise provided in Section 880-4 or directed by Engineer. Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers, drags, or harrows; or by other methods approved by the Engineer. All rock and debris 3 inches or larger shall be removed on cut or fill slopes which are 3:1 or flatter, medians, shoulders, and ditch slopes prior to the application of seed and fertilizer. Type II seeding and mulching will be required in all areas except for residential areas.

Superficial scratching of the slope surface will not be sufficient seedbed preparation. On 2:1 or 1-1/2:1 slopes, a seedbed preparation will be required approaching the degree of preparation required on flatter areas as far as depth is concerned although the same degree of smoothness of seedbed will not be required.

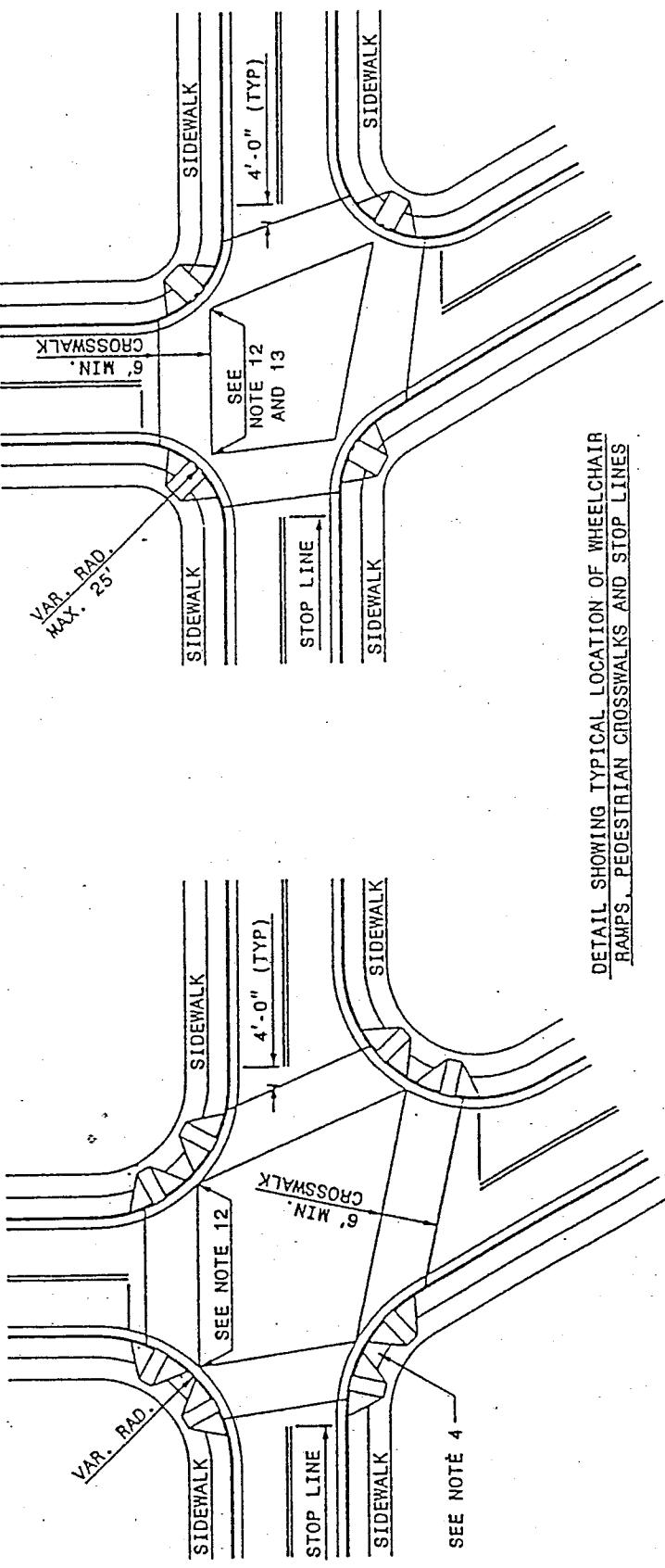


Domes' *Surveillance* 7-96

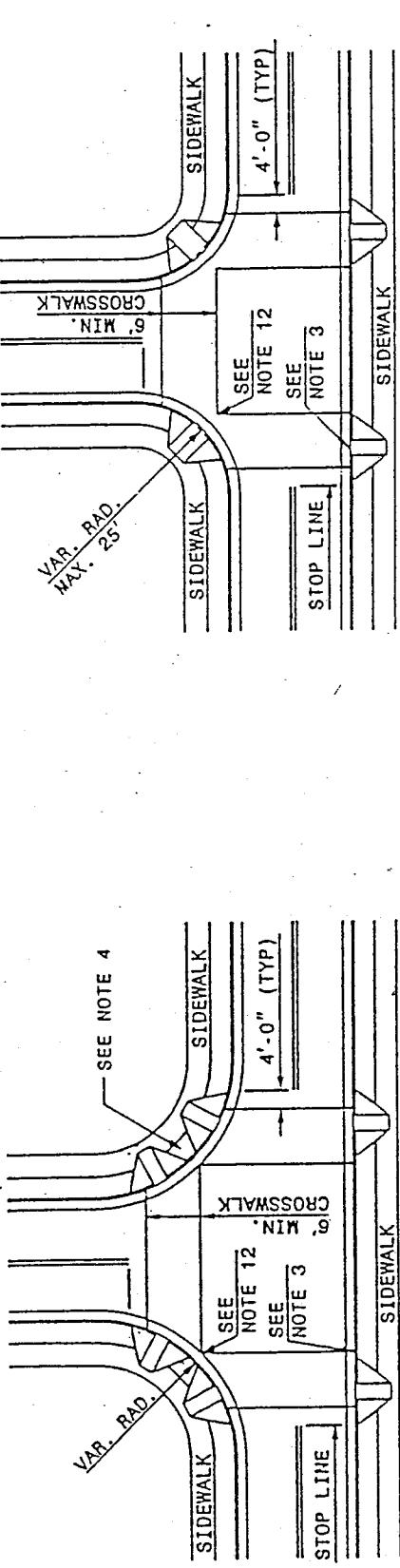
SHEET 1 OF 3

STD. NO.	REV.
848.05	C

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR RAMP, PEDESTRIAN CROSSWALKS AND STOP LINES



DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR RAMPS,  
PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS.

REVISIONS		DESCRIPTION
NO.	DATE	GEN. REV. TO COMPLY W/ A.D.A. (CHANGES MADE 1-15-92 BY DETAIL)
B	1-19-93	
C	1-17-95	DETECTABLE VARNS REMOVED; SINGLE RAAPS ADDED

## **STANDARD WHEELCHAIR RAMP**

CURB CUT  
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

STD. NO. REV.  
848.05 C

## NOTES:

1. THE WALKING SURFACE SHALL BE SLIP RESISTANT.
2. CROSSWALK WIDTHS AND CONFIGURATION VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.
3. NORTH CAROLINA GENERAL STATUTE 136-44.14. REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES. TRAFFIC AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW.
4. IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE.
5. THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES, COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH TITLE III OF THE ADA; BECOMING EFFECTIVE ON JANUARY 26, 1992. THE ADA REQUIREMENTS FOR DETECTABLE WARNING IS SUSPENDED EFFECTIVE MAY 12, 1994.
6. WHEELCHAIR RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. WHEELCHAIR RAMPS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED NOT LESS THAN 2 FEET OF FULL HEIGHT CURB SHALL BE PLACED BETWEEN THE RAMPS.
7. ALL 4" CONCRETE USED FOR CONSTRUCTION OF WHEELCHAIR RAMPS WILL BE PAID FOR AS CONCRETE WHEELCHAIR RAMPS. (SQ. YDS.)
8. ALL DEPRESSED CURBS AT WHEELCHAIR RAMPS WILL BE PAID FOR AS 2'-6" CONCRETE CURB AND GUTTER OR WHATEVER TYPE CURB AND GUTTER IS USED ADJACENT TO DEPRESSED CURB. (LN. FT.)
9. SUCH PRICES AND PAYMENTS WILL BE CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
10. NO SLOPE ON THE WHEELCHAIR RAMP SHALL EXCEED 1" / 1' (12:1) IN RELATIONSHIP TO THE GRADE OF THE STREET.
11. IN NO CASE SHALL THE WIDTH OF THE WHEELCHAIR RAMP BE LESS THAN 40" (3'-4") HOWEVER, WIDTH MAY EXCEED 40".
12. USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
13. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01.
14. THE INSIDE PEDESTRIAN CROSSWALK LINES SHALL BE SET NO CLOSER IN THE INTERSECTION THAN WOULD BE ESTABLISHED BY BISECTING THE INTERSECTION RADII, WITH ALLOWANCE OF A 4' CLEARZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 17)
15. THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SHALL BE COORDINATED SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. DIAGONAL RAMPS WITH FLARED SIDES SHALL BE PLACED SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.
16. THE MINIMUM WIDTH OF THE PEDESTRIAN CROSSWALK SHALL BE 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.
17. STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY.
18. PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
19. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD. ALL PAVEMENT MARKINGS SHALL BE DONE BY OTHERS.

REVISIONS	
NO.	DATE
B	1-19-93 GEN. REV. TO COMPLY W/ A.D.A. (CHARGES MADE 1-15-92 BY DETAIL)
C	1-17-95 DETECTABLE MARKINGS REMOVED; SINGLE RAMPS ADDED

## STANDARD WHEELCHAIR RAMP

CURB CUT  
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

SHEET 3 OF 3

STD. NO.	REV.
848.05	C

